

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A system for delivering location-based services to mobile clients in a building structure using short-range wireless technology, comprising:

~~a plurality of short range wireless communication devices, each of the mobile clients equipped with at least one of said devices;~~

a plurality of short range wireless access points adapted to communicate ~~for communicating with mobile clients~~ ~~said mobile clients via said short range wireless communication devices;~~

a location registry ~~having means~~ for tracking a location of each of said mobile clients;

~~access point software for enabling communication of information between said location registry and said access points; and~~

one or more location-aware service proxies adapted ~~for to receive~~ intercepting client requests for location-based services ~~from ones of the mobile clients and for to deliver~~ delivering responses thereto, the responses comprising location-based ~~location-based~~ information generated in view of the tracked location of the respective mobile client indicated by the location registry;

wherein at least one of the location-aware service proxy includes:

means for receiving a DNS request specifying a host name from a mobile client,

means for determining that the requested host name corresponds to a location-based service, and

means for returning an IP address of the host name based on the client's location responsive to the determination that the requested host name corresponds to a location-based service.

2. (Currently Amended) A system as recited in claim 1, further comprising a module for providing communication between the location registry and each of the access points.

~~wherein said access point software is maintained on an adapter coupled to said wireless access points.~~

3. (Currently Amended) A system as recited in claim 1, further comprising at least one active client list, ~~each of said active client lists~~ maintained by a ~~distinct one of said~~ wireless access points and containing Medium Access Control (MAC) addresses for one said clients which are currently visible to said maintaining wireless access point.

4. (Previously Presented) A system as recited in claim 1, wherein said wireless access points include means for detecting an identity of a system user.

5. (Original) A system as recited in claim 1, wherein said wireless access points have means for detecting one or more mobile client characteristics.

6. (Currently Amended) A system as recited in claim 1, wherein said location registry further comprises:

means for receiving notification information from said wireless access points; and
means for maintaining a list ~~table listing~~ of wireless access points associated with each of said mobile clients, responsive to said ~~means for~~ receiving means.

7. (Cancelled).

8. (Original) A system as recited in claim 1, wherein said one or more location aware service proxies comprise at least one of: an HTTP proxy, a WSP proxy, a DNS proxy, a message proxy and a directory proxy.

9. (Cancelled).

10. (Previously Presented) A system as recited in claim 8 wherein said message proxy includes means for filtering a list of current messages requested from a message server based upon a requesting client's location.

11. (Previously Presented) A system as recited in claim 1, further comprising a protocol proxy, said protocol proxy annotating content received from a particular one of said service proxies.

12. (Previously Presented) A system as recited in claim 11, wherein said location registry further comprises a query interface with which the protocol proxy can obtain location information about a mobile client.

13. (Cancelled).

14. (Currently Amended) A method for delivering location-based services to a plurality of mobile clients located within a building structure using short-range wireless technology, the mobile clients each carrying a short-range wireless communication device, the method comprising the steps of:

~~communicating information between a plurality of short range wireless access points and a location registry via access point software, each of the access points adapted to communicate with mobile clients via wireless communication devices;~~

~~continuously tracking a location of each of said mobile clients via said location registry;~~

receiving a plurality of requests for services from mobile clients; and

providing location-aware services to the mobile clients from a plurality of location aware service proxies, responsive to intercepting the client requests; ~~from the mobile clients.~~

wherein at least one of the location aware service proxy is adapted to perform the steps of:

receiving a DNS request specifying a host name from a mobile client,

determining that the requested host name corresponds to a location-based service,

and

determining an IP address for the requested host name based on the client's

location and in response to the determination that the requested host name corresponds to a location-based service.

15. (Cancelled).

16. (Cancelled).

17. (Currently Amended) The method of claim 14, further comprising the steps of:
establishing a plurality of short-range wireless access points adapted to communicate
with the mobile clients; and
providing a notification to a location registry upon detecting a mobile client on an access
point.

~~A method as recited in claim 14, further comprising the step of transmitting a register notification from a wireless access point to said location registry upon detecting a new mobile client address on said wireless access point.~~

18. (Currently Amended) A method as recited in claim [[14]] 17, further comprising the step of transmitting a reverse registration notification from [[a]] the wireless access point to said location registry upon detecting a mobile client departure from said wireless access point.

19. (Currently Amended) A method as recited in claim [[16]] 14, further comprising the step of monitoring the quantity of time lapsed since the previous detection of traffic for each of said active mobile clients.

20. (Previously Presented) A method as recited in claim 19, further comprising the step of defining a mobile client departure from a wireless access point based upon said time lapse.

21. (Currently Amended) A method as recited in claim [[14]] 17, further comprising the step of transmitting register notifications from a wireless access point to said location registry at timed intervals, said register notification including a list of all mobile clients actively communicating with said access point, said location registry defining a mobile client address as unregistered where the client is not included on the active mobile client list.

22. (Currently Amended) A method as recited in claim [[14]] 17, further comprising the step of maintaining an active client list associated with each access point, each active client list including the corresponding MAC addresses.

23. (Previously Presented) A method as recited in claim 22, further comprising the step of adding a MAC address of a mobile client upon detection of network traffic from said mobile client.

24. (Previously Presented) A method as recited in claim 22, further comprising the step of deleting a MAC address of a mobile client upon failure to detect respective client traffic within a predetermined time period.

25. (Currently Amended) A method as recited in claim [[14]] 17, further comprising the step of transmitting notification information from said wireless access points to said location registry, said location registry maintaining a list ~~table-listing~~ of current access points associated with each of the mobile clients.

26. (Currently Amended) A method as recited in claim [[14]] 17, further comprising the step of enhancing the functionality of an access point to identify a system user or a mobile client characteristic.

27. (Currently Amended) A method as recited in claim 17, further comprising the step of adding an access point ID to [[a]] the location registry ~~location-list~~ for a particular client ID upon receiving a registry notification.

28. (Currently Amended) A method as recited in claim 17, further comprising the step of removing an access point ID from the location registry ~~list~~ for a particular client ID upon receiving a reverse registry notification.

29. (Currently Amended) A method as recited in claim 14, further comprising the steps of:

~~intercepting client requests via said location-aware service proxies; and~~
generating responses incorporating location-based ~~sensitive~~ information via said location aware service proxies.

30. (Cancelled).

31. (Previously Presented) A method as recited in claim 14 wherein the location aware service proxy further comprises a message proxy, the method further comprising the step of filtering a list of current messages received from a message server, based upon a client location, via said message proxy.

32. (Currently Amended) A method as recited in claim 14, wherein the location aware service proxy further comprises a protocol proxy adapted to annotate messages received from the location aware service proxy. ~~further comprising the step of annotating content received by said protocol from said location aware service proxy.~~

33. (Previously Presented) A system as recited in claim 1, further comprising at least one active client list, each of said active client lists maintained by an adapter coupled to a distinct one of said wireless access points and containing Medium Access Control (MAC) addresses for ones of said clients which are currently visible to said maintaining wireless access point.

34. (Currently Amended) A system as recited in claim 1 wherein each location aware service proxy is adapted to intercept ~~for intercepting~~ requests of a particular type.

35. (Currently Amended) A system as recited in claim 34, wherein each location aware service proxy is further adapted to determine ~~for determining~~, from the location registry, the location of a particular client from which a particular client request is intercepted, such that the determined location can be used when generating the location-based ~~location-sensitive~~ information.

36. (Previously Presented) A system as recited in claim 35, wherein the determined location comprises a list of ones of the access points with which the particular client is currently associated.

37. (Previously Presented) A system as recited in claim 35, wherein the determined location comprises geographic coordinates of ones of the access points with which the particular client is currently associated.

38. (Previously Presented) A system as recited in claim 35, wherein the determined location comprises a building and room number of ones of the access points with which the particular client is currently associated.

39. (Previously Presented) A system as recited in claim 1, wherein each location aware service proxy is further adapted for contacting a third-party information source to obtain information used in generating the location-based ~~location-sensitive~~ information.

40. (Previously Presented) A system as recited in claim 11, wherein the protocol proxy annotates the content with available services.

41. (Previously Presented) A system as recited in claim 40, wherein the available services result from a location-based ~~location-sensitive~~ filtering of an available services list.

42. (Previously Presented) A method as recited in claim 32, wherein at least one of the available services annotations further comprises a link to one of the available services.